



THE
ONTARIO WATER RESOURCES
COMMISSION

LAKEFRONT SURVEY

of

LAKE ONTARIO

within the

TOWNSHIP OF TORONTO

MOE
TOR
LAK
ATIN

c.1
a aa

LIBRARY COPY

APR 6 1965

ONTARIO WATER
RESOURCES COMMISSION

1964

Copyright Provisions and Restrictions on Copying:

This Ontario Ministry of the Environment work is protected by Crown copyright (unless otherwise indicated), which is held by the Queen's Printer for Ontario. It may be reproduced for non-commercial purposes if credit is given and Crown copyright is acknowledged.

It may not be reproduced, in all or in part, for any commercial purpose except under a licence from the Queen's Printer for Ontario.

For information on reproducing Government of Ontario works, please contact ServiceOntario Publications at copyright@ontario.ca

REPORT

on

LAKEFRONT SURVEY

of

LAKE ONTARIO

within the

TOWNSHIP OF TORONTO

Division of Sanitary Engineering

Ontario Water Resources Commission

1964

100
TOP
OFF
ATTN

INDEX

<u>Section</u>	<u>Page No.</u>
INTRODUCTION	1
WATER QUALITY & EFFLUENT OBJECTIVES	1
WEATHER OBSERVATIONS	2
WATER POLLUTION CONTROL PLANTS	
Clarkson WPCP	3
Lakeview WPCP	4
LABORATORY RESULTS	
Industrial & Municipal Outfall Sewers..	4
Drainage Inlets	6
Lake Ontario	6
COMMENTS	7
RECOMMENDATIONS	9
ANALYTICAL RESULTS	
PLANS OF THE TOWNSHIP OF TORONTO	

INTRODUCTION

The purpose of this report was to re-assess the conditions as noted in the previous OWRC report entitled "Lakefront Survey of Water Quality, Waste Outfalls and Drainage Inlets of Lake Ontario within the area Town of Burlington to Scarborough Township" May 1962. This presentation encompasses only the shoreline area fronting on the Township of Toronto. The other municipalities bordering on Lake Ontario have been reviewed in individual surveys and reports.

Water pollution surveys of this type are made routinely and upon request by the Ontario Water Resources Commission, and are designed to evaluate the existing or potential sources of water contamination as noted in the previous survey report. Corrective measures are recommended where sources of water contamination continue to exist.

In difficult situations, the laboratory and research services of the OWRC are available to assist in the determination of a satisfactory remedy.

WATER QUALITY & EFFLUENT OBJECTIVES

The OWRC objectives for surface waters in the Province of Ontario are as follows:

5-day Biochemical Oxygen Demand (BOD) - not greater than 4.0 ppm
Membrane Filter (MF) Coliform Count - not greater than 2400 coliforms
per 100 ml

Phenolic Equivalents -

Average - not greater than 2 ppb

Maximum - not greater than 5 ppb

pH Range - 6.7-8.5

Some pertinent maximum allowable concentration limits of contaminants in all discharges to surface waters are listed below. Adequate protection for surface waters should be afforded if the following concentrations and pH range are not exceeded. These values could be changed in certain specific instances as dictated by local circumstances.

5-day BOD	-	15 ppm
Suspended Solids	-	15 ppm
Phenolic Equivalents	-	20 ppb
Ether Solubles (oil)	-	15 ppm
pH range	-	5.6 - 10.6

As with the previous survey "grab" samples were collected for chemical analysis and bacteriological examination. The tabulated laboratory results are appended to this report with the results of samples included in the previous report. A plan of the area showing the sampling point locations has also been appended.

The present survey was conducted by the Division of Sanitary Engineering of the Ontario Water Resources Commission and all samples were submitted to the OWRC laboratory.

WEATHER OBSERVATIONS

During and immediately prior to the sampling periods no appreciable precipitation occurred and therefore the flow in the storm sewers and watercourses were assumed not to be a maximum.

Lakeview WPCP

This 5.0 mgd plant has experienced a rapid increase in sewage flow along with an increase in strength from the 1962 to the present. This is indicated in the table which follows. The deterioration in effluent quality is therefore a result of overloaded conditions at this plant. On occasions the total flow received at this plant has exceeded 8.0 mgd. A 5.0 mgd extension has been planned for immediate construction but as yet the required municipal agreements have to be finalized.

Plant Performance

<u>Year</u>	<u>Total Flow mg</u>	<u>Avg. Day mgd</u>	<u>Raw Sewage BOD ppm</u>	<u>S.S. ppm</u>	<u>Final Effluent BOD ppm</u>	<u>S.S. ppm</u>
1962	740.929	2.030	173	264	27	42
1963	1205.525	3.303	213	260	14	18
1964	1738.899	5.701	266	277	42	61
(To Oct.31/64)						

LABORATORY RESULTS

The appended tabulated laboratory results also include a brief description of the sample location and type of outfall. The total number of sampling stations were 42.

INDUSTRIAL & MUNICIPAL OUTFALL SEWERS

Private industrial and municipal storm sewer discharges have been coded by the letters "I" and "W" respectively, following the mileage point number. A total of 10 such sampling stations have been sampled where a flow was noted and the outfall was located.

To this category has been added the storm and backwash drains from the Township of Toronto Water Works Treatment Plant. These discharges have been denoted by the letter "P".

Contaminating material was being discharged at the following three locations:

LO-62.8 W - Storm Sewer at Southdown Road - A small flow of 1.5 gpm was estimated at the outlet which was shown to contain an excessive BOD, suspended solids content, coliform count and phenol content greater than the OWRC maximum objective. The BOD was 92 ppm, the suspended solids was 50 ppm, coliform count was 16 million per 100 ml and the phenol content was 10,000 ppb.

LO-63.0 I - British American Oil Company Limited Industrial Sewer - The chemical and bacteriological results showed that the effluent from this plant exceeded slightly the OWRC objective maximum in the 1964 survey. It is noted that oil separation and hydrogen sulphide removal is effected prior to discharging the wastes to a bio-oxidation activated sludge plant. The per cent removal generally has been satisfactory and as noted the final effluent only occasionally exceeded slightly the maximum chemical objective.

LO-69.2 W - Storm Sewer at Township of Toronto Water Works- Only one sample has been collected from this outfall and the BOD and suspended solids content was shown to be 36 ppm and 47 ppm. However, the flow was insignificant at this time and there was no flow at the time of the 1961 sampling survey. It is therefore indicated that this outfall has not adversely affected the lake.

DRAINAGE INLETS

There are 17 watercourses which flow to Lake Ontario within the township boundaries. The watersheds are generally quite small and the creeks only experience a significant flow rate during periods of precipitation.

Generally, the watercourses have exhibited a satisfactory quality as shown by the sanitary chemical analyses. An improvement in the water quality in the watercourses between Crozier Street and Ben Machree Drive (LO-65.9D) and the creek east of the Lakeview water pollution control plant (LO-70.3D) has occurred since the previous Lake Ontario Report of 1962.

While the number of determinations are insufficient to indicate a definite trend in the phenol contents of the watercourses it appears that the OWRC objective has been exceeded on numerous occasions.

The bacteriological examinations indicated a variable water quality in many of the streams. However, the following sampling locations may be cited as containing an excessive coliform density: LO-65.9D (local watercourse between Crozier Street and Ben Machree Drive); LO-68.7D (Cooksville Creek opposite the easterly limit of Richey Crescent); LO-69.1D (local watercourse east of Lakeview WPCP); and LO-70.7D (Etobicoke Creek).

LAKE ONTARIO

Thirteen lake water sampling points have been established along the township shoreline. Generally, all the samples were

collected from near the water surface within 50 feet of the shore where accessible by boat. The exception to this procedure was the collection of samples directly over submerged outfall discharges extending a considerable distance into the lake. The following locations were indicated as having a BOD greater than 4.0 ppm and a coliform density greater than 2400 per 100 ml.

LO-63.0 - near the British American Industrial Sewer outlet - a coliform count of 5000 was obtained. Also, a high coliform count was obtained in the industrial outfall designated LO-63.0I.

LO-65.1 - the high coliform count obtained in the water offshore from the Lorne Park Estates is not explainable at this time.

LO-70.2 - the sample collected at this point contained a high BOD of 5.3 ppm. This is explained by the hydraulically overloaded condition of the Lakeview water pollution control plant as the sample was collected near the outlet end of the outfall pipe.

LO-70.6 & LO-70.7 - the excessive coliform counts in both of these lake water samples were the result of adverse conditions existing in the Etobicoke Creek at the entrance to Lake Ontario. The BOD of the sample collected at LO-70.7 exceeded slightly the OWRC objective of not greater than 4.0 ppm.

COMMENTS

The condition of the lake generally was shown to be satisfactory during 1964 from a chemical and bacteriological standpoint

except in a few instances as noted. Of the total of 13 water samples collected for chemical analysis two indicated that the lake water had been adversely affected. Four water samples indicated excessive coliform densities of 13 samples collected.

Expansion of the Lakeview water pollution control plant has been scheduled for the immediate future and it is therefore anticipated that the discharge of sanitary sewage which has not been adequately treated will be eliminated in the near future.

The industrial waste treatment plant which serves the British American Oil Company Limited has been quite efficient in the removal of BOD, suspended solids and phenols from the waste waters. However, an unsatisfactory effluent continues to be discharged to the lake on various occasions.

The adverse quality of the Etobicoke Creek is the result of the discharge of sanitary sewage directly to the creek or the discharge of final effluents from four water pollution control plants. It is noted that with the removal from service of the Malton International Airport plant and proposed extension of the Brampton-Chinguacousy plant an improvement in the water quality of this stream is expected.

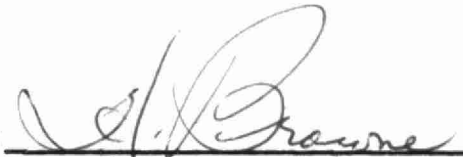
The Southdown Road storm sewer discharges adversely affected the lake water quality and the required action should therefore be taken to eliminate all liquids which are not of storm origin from this sewer.

RECOMMENDATIONS

1. The separation of "sanitary sewage" from the Southdown Road storm sewer should receive the required attention.
2. The Lakeview water pollution control plant should be extended at an early date.

All of which is respectfully submitted,

District Engineer:


H. Browne

Approved by:


K.H. Sharpe, Director

Prepared by: K.A.Reichert

ds

ALL ANALYSES EXCEPT PH REPORTED IN PPM UNLESS OTHERWISE INDICATED

SAMPLING POINT NO.	LOCATION & DESCRIPTION	DATE	5-DAY BOD	TOTAL SOLIDS	SUSPENDED SOLIDS	TURBIDITY IN SILICA UNITS	MF COLIFORM COUNT/100ML	EST DWF	PHENOLS PPB	ETHER SOLUBLES PPM
L0-61.6	OPPOSITE MOUTH OF JOSHUA'S CREEK	MAY 15/62 SEPT. 23/62 SEPT. 9/64	1.2	182	4		1290 70		0 -	-
L0-61.6 D	JOSHUA'S CREEK AT LAKESHORE RD.	SEPT. 20/60 NOV. 9/60 NOV. 30/61 AUG. 22/62 SEPT. 5/63 JULY 24/64	2.7 4.0 4.3 5.5 1.0 1.4	418 532 562 462 466 544	6 - - - 6 8	-- 5 5 6.5 --	16,000 630 7,000 5,100 94		6 13 6 5 10 -	-
L0-62.1 I	INDUSTRIAL SEWER ST. LAWRENCE CEMENT CO.	NOV. 30/61 AUG. 22/62 SEPT. 6/62 JULY 24/64	2.8 1.7 1.3 2.4	310 312 268 294	- 16 10 29	5.5 -- --	130 10 1600		6 0 8 -	-
L0-62.2	NEAR CLARKSON WPCP SEWER OUTFALL (SPLE 2000' OFFSHORE)	MAY 15/62 SEPT. 23/62 SEPT. 9/64	1.2	196	3		1020 450		0 10	TRACE
L0-62.2 T	42-INCH Ø OUTFALL SEWER CLARKSON WPCP	SEPT. 20/60 NOV. 9/60 DEC. 1/61 AUG. 22/62 SEPT. 6/63	15 5.6 0.7 11.0 32.0	630 664 594 926 954	16 -- -- 26 43	-- 12 20 --	51,000 20 <10 2		10 2 7 15 -	
L0-62.4 D	LOCAL WATERCOURSE BETWEEN AVONHEAD & SOUTHDOWN RDS.	DEC. 1/61 SEPT. 6/63 JULY 24/64	2.2 2.6 1.2	816 486 422	-- 2.5 11	2.9 --	900 1,010,000		6 10 -	-
L0-62.8 W	27-INCH Ø STORM SEWER SOUTHDOWN RD.	DEC. 1/61 SEPT. 6/63 JULY 24/64	420.0 3.5 92.0	1194 222 854	220 4 50		760,000 16,000,000		1200 20 10,000	-
L0-62.8 W-1	24-INCH Ø STORM SEWER SOUTHDOWN RD.	SEPT. 6/63	1.1	480	2				0	
L0-63.0	NEAR B.A. OIL CO. LTD. INDUSTRIAL SEWER OUTLET (SPLE 1600' OFFSHORE)	MAY 15/62 SEPT. 23/62 SEPT. 9/64	2.0	206	2		58 5,000		30 0	TRACE

ALL ANALYSES EXCEPT PH REPORTED IN PPM UNLESS OTHERWISE INDICATED

SAMPLING POINT NO.	LOCATION & DESCRIPTION	DATE	5-DAY BOD	TOTAL SOLIDS	SUSPENDED SOLIDS	TURBIDITY IN SILICA UNITS	MF COLIFORM COUNT/100ML	EST. DWF	PHENOLS PPB	ETHER SOLUBLES PPM
L0-63.0 I	48-INCH Ø INDUSTRIAL SEWER B.A. OIL CO. LTD.	DEC. 1/61 SEPT. 4/63 SEPT. 30/63 DEC. 30/63 JULY 17/64	66 1.2 9.2 19.0	330 162 2 250	-- -- 20	53.0 11.5 --	-- 100 11,000	 NIL	30 0 200 0 35	5.3 0 - -
L0-63.0 I-1	42-INCH Ø INDUSTRIAL SEWER- B.A. OIL CO. LTD.	SEPT. 20/60 DEC. 6/60 DEC. 1/61 SEPT. 4/62 JULY 17/64	 8.4 1.6 46 3.2	 188 198 214 210	 22 -- -- 3	 -- 2.5 42 --	 0 420	 NIL	 8 4 800 0	 0 - 14 -
L0-63.0 I-2	42-INCH Ø INDUSTRIAL SEWER B.A. OIL CO. LTD.	SEPT. 20/60 DEC. 6/60 DEC. 1/61 SEPT. 4/62 JULY 17/64	4.8 8.0 2.1 2.1 9.0	226 176 200 172 198	22 8 -- -- 5	-- -- 2.5 9.0 --	 82 0 12,000	 NIL	140 110 3 0 9	 17 - 0 -
L0-63.3	OPPOSITE EASTERN EXTREMITY OF B.A. TANK FARM	MAY 15/62 SEPT. 23/62 SEPT. 9/64	 1.1	 212	 1	 	 4,900 450	 	0 -	 -
L0-63.8	OPPOSITE MEADOW WOOD PK.	MAY 15/62 SEPT. 23/62 SEPT. 9/64	 1.0	 204	 5	 	 16,000 330	 	0 -	 -
L0-64.4 D	LOCAL WATERCOURSE OPPOSITE FOOT OF BEXHILL RD.	SEPT. 20/60 NOV. 9/60 DEC. 1/61 JULY 17/64	2.6 2.6 3.1 3.2	626 488 658 522	- - - 33	3 3 2.6 --	900 29 1,600 600	 	2 - 4 -	
L0-64.6 CHANGED FROM L0-64.4	OPPOSITE LOCAL WATER- COURSE (PARK AT BEXHILL RD.)	MAY 15/62 SEPT. 23/62 SEPT. 9/64	 1.0	 214	 2	 	 7,000 420	 	0 -	 -
L0-64.9 D	LOCAL WATERCOURSE SOUTH EDELWEISS DR.	SEPT. 20/60 NOV. 9/60 DEC. 1/61 JULY 17/64	4.0 5.0 3.0 0.7	706 670 682 564	10 - - 8	-- 10 4.5 --	280,000 3,100 900 480	 	0 - 2 -	

ALL ANALYSES EXCEPT PH REPORTED IN PPM UNLESS OTHERWISE INDICATED

SAMPLING POINT NO.	LOCATION & DESCRIPTION	DATE	5-DAY BOD	TOTAL SOLIDS	SUSPENDED SOLIDS	TURBIDITY IN SILICA UNITS	MF COLIFORM COUNT/100ML	EST DWF	PHENOLS PPB	ETHER SOLUBLES PPM
L0-64.9 CHANGED FROM L0-64.6	OPPOSITE GOLF COURSE FLAG POLE	MAY 15/62 SEPT.23/62 SEPT.9/64	1.0	204	2		4,400 590		0 -	-
L0-65.0 D CHANGED FROM L0-64.9 D	LOCAL WATERCOURSE WEST LUGSDIN AVE.	SEPT.20/60 NOV.9/60 DEC.1/61 SEPT.6/63 JULY 17/64	2.4 2.1 2.9 1.4 1.5	464 458 480 618 640	- - - 5 31	2 1 1.7 --	7,000 43 86 458		2 - 4 18 -	-
L0-65.1	OPPOSITE LORNE PARK ESTATES(RED & WHITE HOUSE)	MAY 15/62 SEPT.23/62 SEPT.9/64	1.2	227	1		630 45,000		0 -	-
L0-65.3 D	LOCAL WATERCOURSE BETWEEN MOORE AVE. & WHITTIER CRES.	DEC.1/61 SEPT.6/63 JULY 17/64	1.2	644	7			NIL NIL	-	
L0-65.4 D	LOCAL WATERCOURSE BETWEEN ORIENT AVE. & WHITTIER CRES.	DEC.1/61 SEPT.6/64 JULY 17/64	1.0 0.8	932 640	19 48	--	960	NIL	- -	-
L0-65.5 D	LOCAL WATERCOURSE EAST OF ORIENT AVE.	SEPT.20/60 NOV.9/60 DEC.1/61 AUG.22/62 SEPT.6/63 JULY 11/64	4.8 1.9 2.6 2.4 1.6 1.4	452 492 524 486 446 666	-- -- -- -- 2 4	3 3 3.5 8.0 --	8,000 51 50 9,000 1,580		9 5 3 8 - -	-
L0-65.9	OPPOSITE WEST LIMIT PORT CREDIT NEAR MOUTH OF LOCAL WATERCOURSE BETWEEN CROZIER CT. & BEN MACHREE DR.	SEPT.9/64	1.5	232	1		690		-	-
L0-65.9 D	LOCAL WATERCOURSE BETWEEN CROZIER CT. & BEN MACHREE DR.	SEPT.20/60 NOV.9/60 NOV.20/61 AUG.22/62 SEPT.6/63 JULY 17/64	4.0 17.0 13 1.0 1.1	538 650 756 680 704	- 96 9 8	5 11.5 -- --	1,000 16 59,000 15,000	NIL	- 8 6 7 -	-

ALL ANALYSES EXCEPT PH REPORTED IN PPM UNLESS OTHERWISE INDICATED

SAMPLING POINT NO.	LOCATION & DESCRIPTION	DATE	5-DAY BOD	TOTAL SOLIDS	SUSPENDED SOLIDS	TURBIDITY IN SILICA UNITS	MF COLIFORM COUNT/100ML	EST. DWF	PHENOLS PPB	ETHER SOLUBLES PPM
L0-68.5 D	LOCAL WATERCOURSE OPPOSITE WEST END RICHEY CR.	NOV.30/61	5.2	642	--	20	424		6	
		SEPT.6/63	0.5	350	4				4	
		JULY 16/64	2.2	720	19	-	21,000		-	- -
L0-68.7 D	COOKSVILLE CREEK OPPOSITE EAST END RICHEY CR.	SEPT.19/60	4.0	606	20	-	200,000		8	
		NOV.9/60	3.6	792	--	3	9,700		4	
		NOV.30/61	4.3	856	--	3.5	256		8	
		AUG.23/62	7.4	698	--	12.5	6,000		7	
		SEPT.6/63	0.8	684	10				4	
		JULY 16/64	3.2	652	9	--	14,000		-	--
L0-69.1 D	LOCAL WATERCOURSE AT MONTBECK CRES.	SEPT.19/60	23	286	10	--	290,000		2	
		NOV.9/60	5.1	412	--	3	9,500		-	
		NOV.30/61	34	714	--	24	520		40	
		AUG.23/62	2.0	326	--	8.0	6,800		6	
		MAR.5/64							18	
		JULY 16/64	1.6	630	6	--	240,000		-	--
L0-69.2	NEAR TWP. OF TORONTO W.W.'S INTAKE (SPLE 2000' OFFSHORE)	SEPT.9/64	0.8	198	3		370		3	--
L0-69.2 W	12-INCH ϕ STORM SEWER TWP. OF TORONTO W.W.'S	NOV.30/61						NIL		
		JULY 16/64	36	810	47	--	80	0.5	-	--
L0-69.2 P-1	24-INCH ϕ SURGE DRAIN TWP. OF TORONTO W.W.'S	NOV.30/61						NIL		
		JULY 12/64						NIL		
L0-69.2 P-2	21-INCH ϕ BACKWASH DRAIN TWP. OF TORONTO W.W.'S	NOV.30/61	3.2	246	--	2.3	0		2	
		JULY 16/64		NOT LOCATED						
L0-69.2 P-3	36-INCH ϕ BACKWASH DRAIN TWP. OF TORONTO W.W.'S	NOV.30/61	2.4	234	--	2.3	0		3	
		AUG.23/62	0.9	220	--	1.1	0		0	
		JULY 16/64	1.1	200	5		0	5.0	-	--
L0-69.5 D	DRAINAGE DITCH AT COOLING WATER CHANNEL	NOV.29/61						NIL		
		JULY 24/64	4.4	350	26		28,000		-	--
L0-69.5 D-1	COOLING WATER CHANNEL- LAKEVIEW GENERATING STA.	NOV.29/61	2.9	204	-	2.6			0	
		JULY 24/64	2.4	222	16	--	1,530		-	--

ALL ANALYSES EXCEPT PH REPORTED IN PPM UNLESS OTHERWISE INDICATED

SAMPLING POINT No.	LOCATION & DESCRIPTION	DATE	5-DAY BOD	TOTAL SOLIDS	SUSPENDED SOLIDS	TURBIDITY IN SILICA UNITS	MF COLIFORM COUNT/100ML	EST. DWF	PHENOLS PPB	ETHER SOLUBLES PPM
L0-70.2	NEAR LAKEVIEW WPCP OUTLET (SPLE 2000' OFFSHORE)	SEPT.9/64	5.3	230	2		890		12	
L0-70.2 T	OUTFALL SEWER LAKEVIEW WPCP	Nov.29/61	6.8	656	-	24	46		0	
		AUG.23/62	1.9	656	18	--	2		7	
		JULY 24/64	6.8	606	10	--	9,900		--	--
L0-70.3 D	LOCAL WATERCOURSE EAST OF LAKEVIEW WPCP	SEPT.19/60	230	1028	348	--	1,300,000		15	
		Nov.9/60	180	590	80	--	7,300,000		3	
		Nov.20/61	23	816	-	10.5	24,000		6	
		JULY 16/64	1.8	803	16	--	8,000,000		--	--
L0-70.5 D	LOCAL WATERCOURSE BETWEEN FERGUS AVE.& DIXIE RD.	SEPT.19/60	NOT SAMPLED							
		Nov.9/60	NOT SAMPLED							
		Nov.29/60	5.1	780	-	12.8	1,000		4	
		AUG.23/62	2.6	780	-	2.0	7,100		5	
L0-70.6	WEST OF MOUTH OF ETOBICOKE CREEK	SEPT.9/64	1.9	298	1		4,400		--	
L0-70.7	OPPOSITE MOUTH OF ETOBICOKE CREEK	SEPT.9/64	4.8	697	21		28,000		10	
L0-70.7 D	ETOBICOKE CREEK AT LAKESHORE RD.	SEPT.15/60	7.2	476	46	--	5,600		2	
		OCT.20/60	4.4	770	-	3.0	14,000		-	
		FEB.15/61	17.0	1362	-	11.0	680		-	
		SEPT.14/61	3.2	708	-	2.0	<10		15	
		Nov.29/61	4.8	666	-	3.8	1,040,000		4	
		AUG.23/62	6.1	730	-	1.5	800		6	
		MAR.5/64							7.0	
		JULY 9/64	1.8			3.1				

TOWN OF OAKVILLE

TOWNSHIP OF TORONTO

HIGHWAY No 2

TENTH LINE

HAZELHURST ROAD

BIRKBECK DR

Joshua's Creek

LAKE ONTARIO

LO - 60-9

LO - 61-6
D

LO - 61-6

LO - 62-1
I

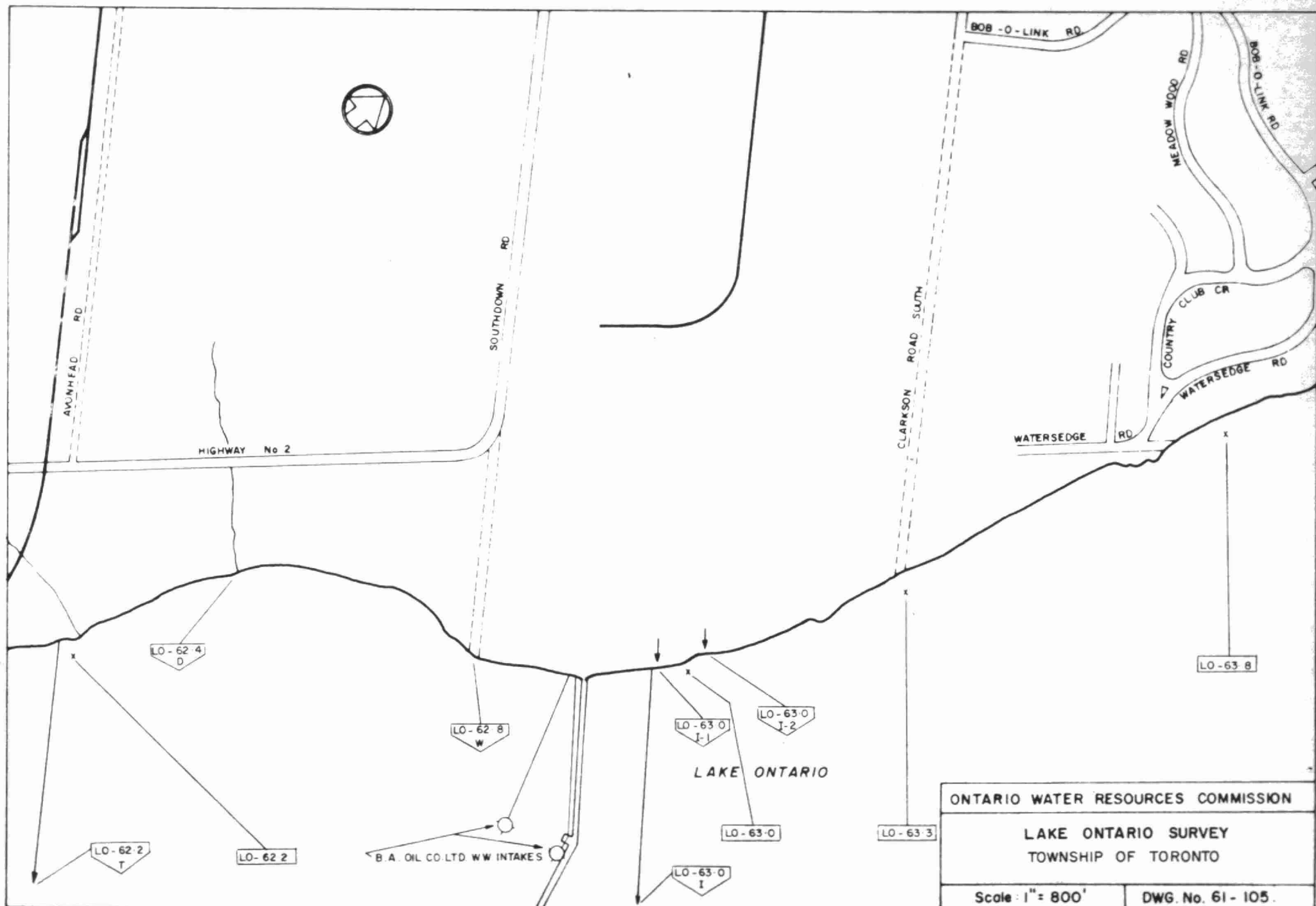
ST. LAWRENCE CEMENT CO.
W W Intake

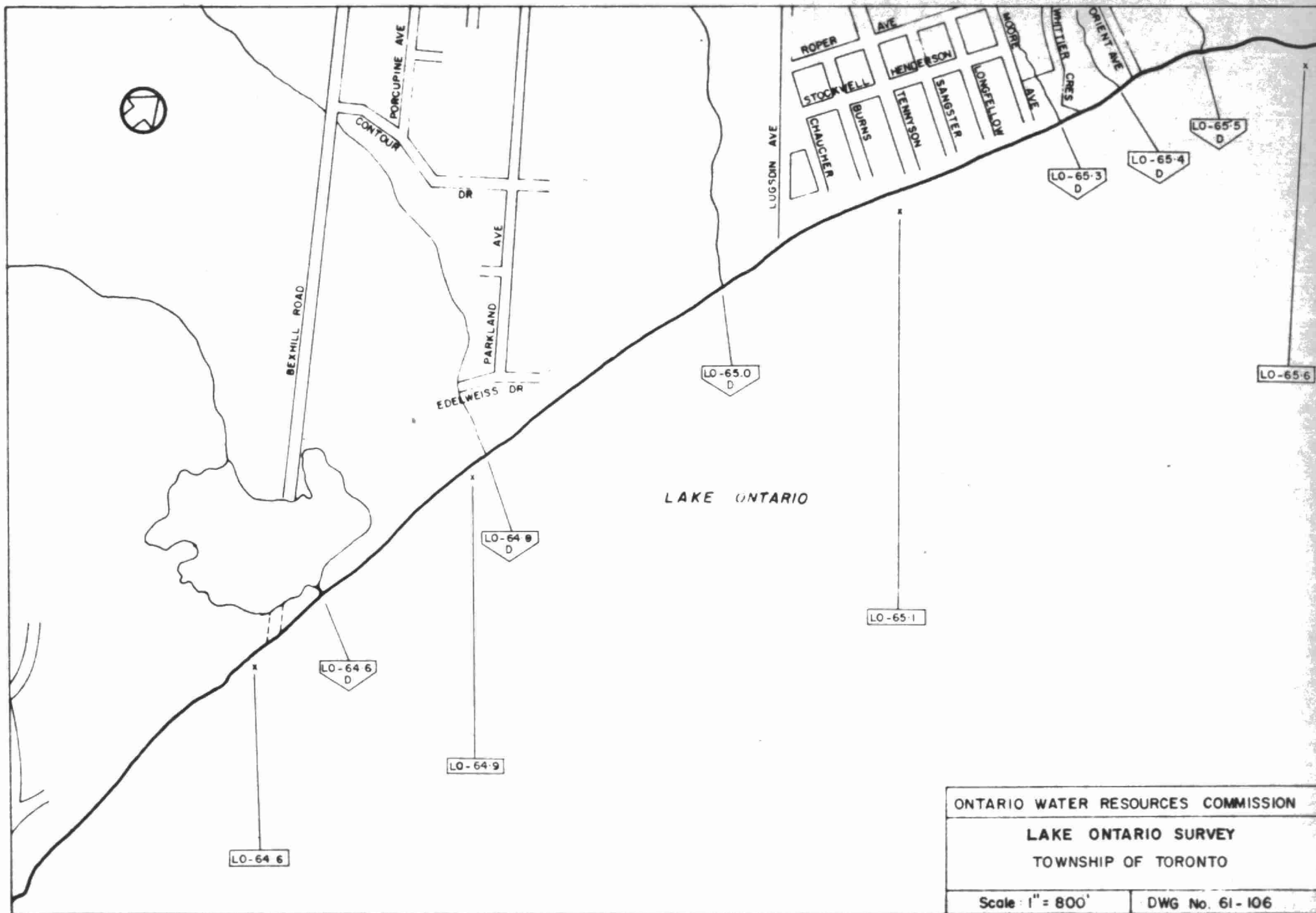
ONTARIO WATER RESOURCES COMMISSION

LAKE ONTARIO SURVEY
TOWNSHIP OF TORONTO

Scale: 1" = 800'

DWG No. 61-104





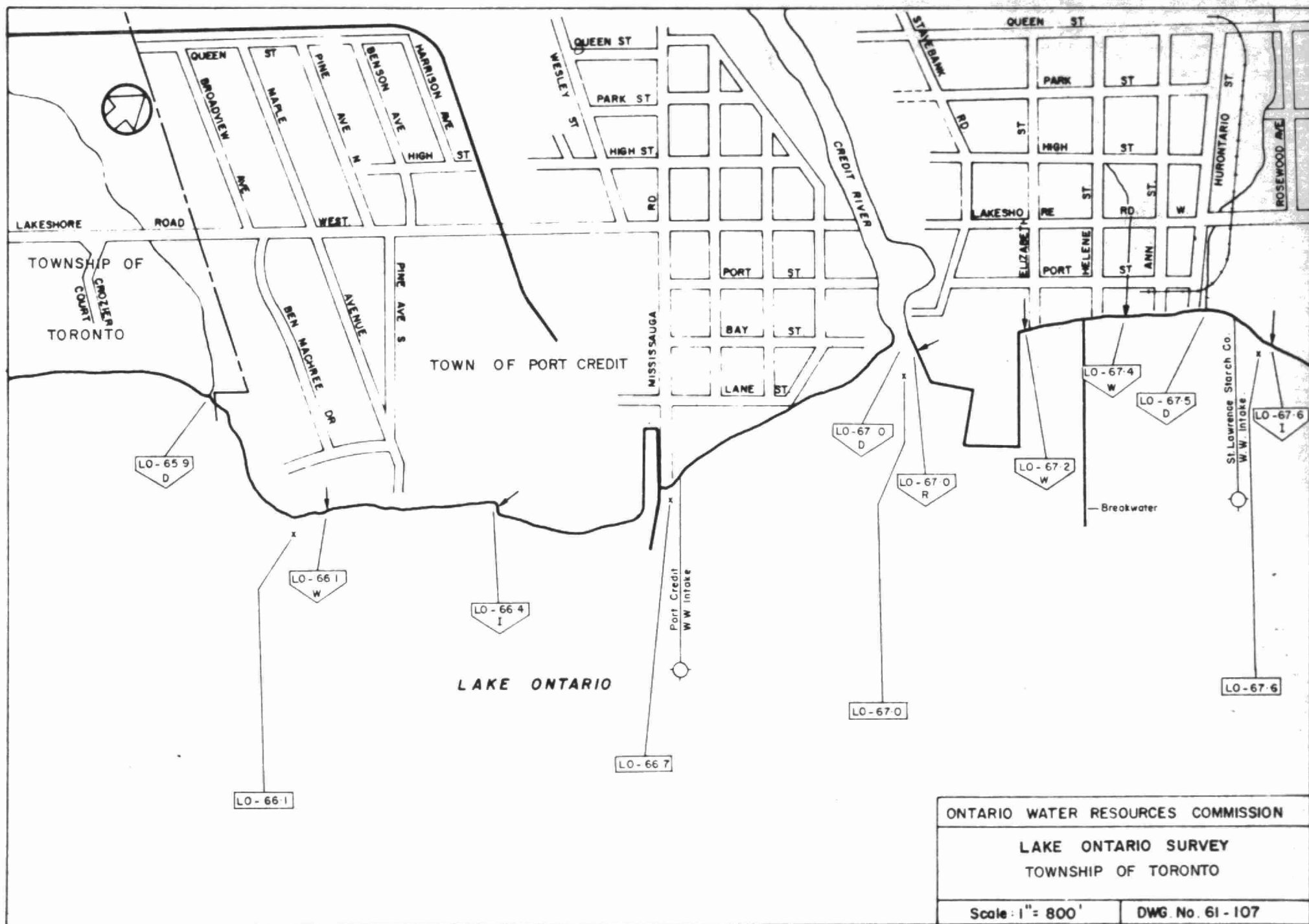
ONTARIO WATER RESOURCES COMMISSION

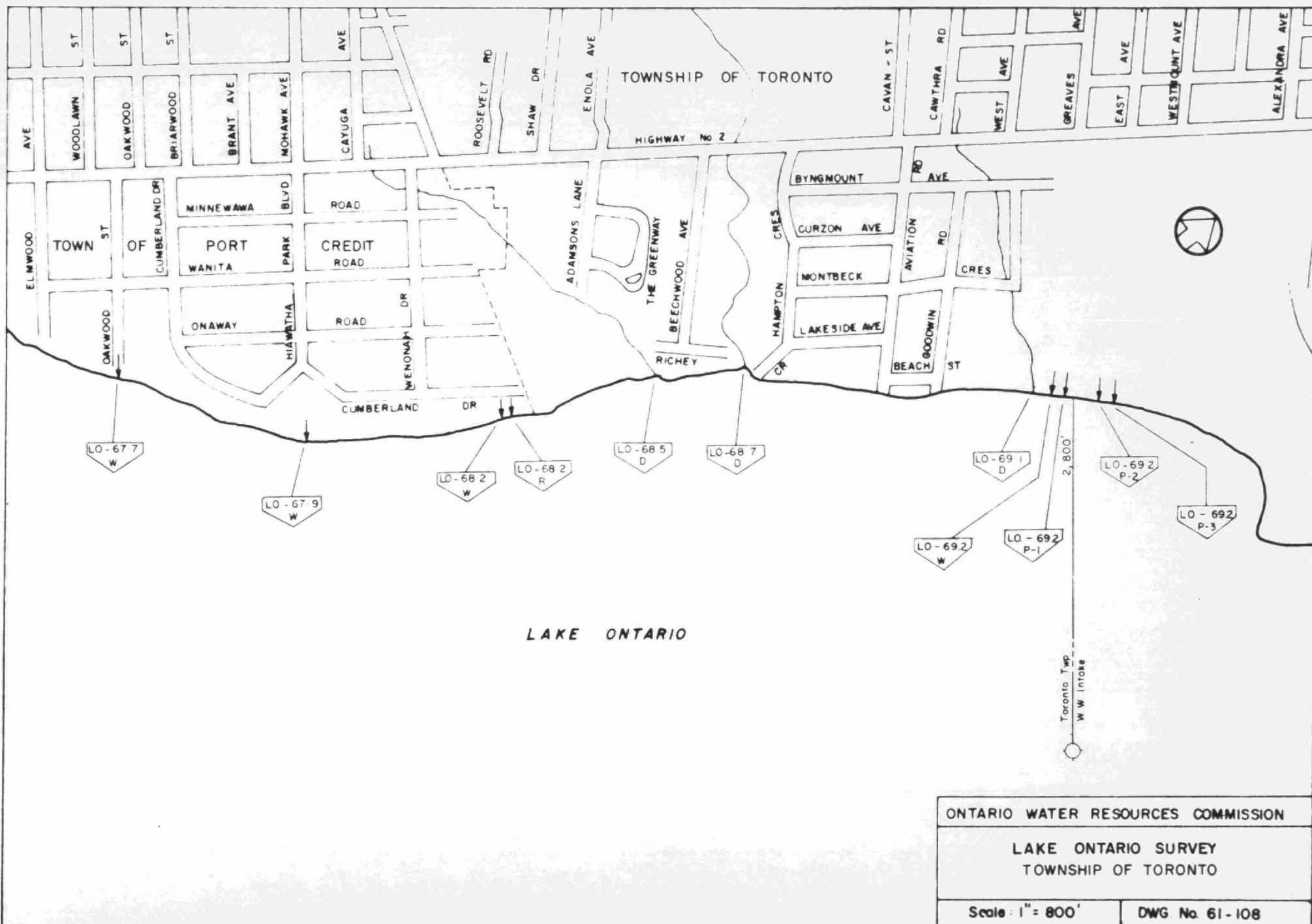
LAKE ONTARIO SURVEY

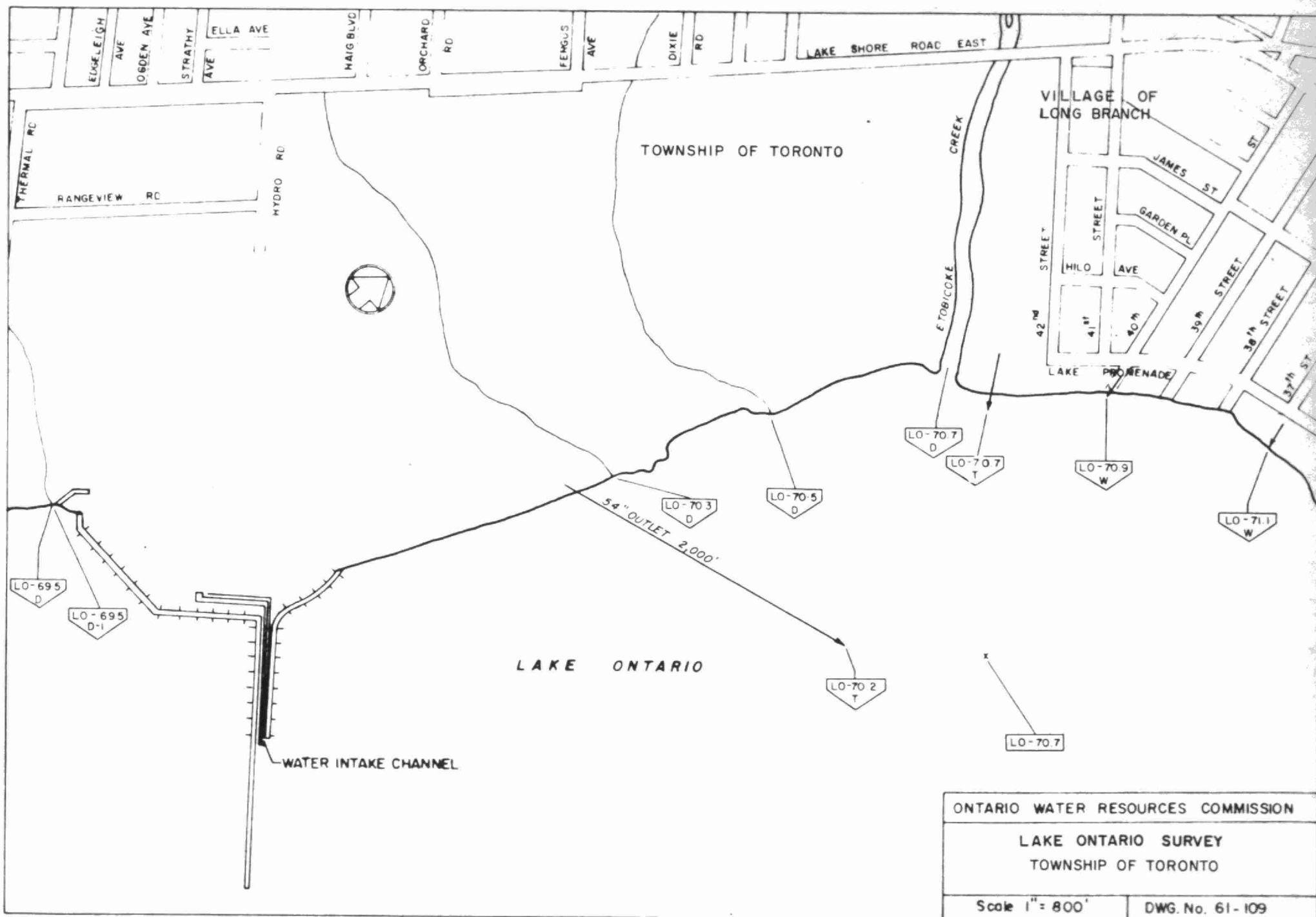
TOWNSHIP OF TORONTO

Scale: 1" = 800'

DWG No. 61-106







ONTARIO WATER RESOURCES COMMISSION

LAKE ONTARIO SURVEY
TOWNSHIP OF TORONTO

Scale 1" = 800'

DWG. No. 61-109

LABORATORY LIBRARY



96936000119224

AL
AUG 16 1974

MOE/TOR/LAK/ATIN

Ontario Water Resources Co
Lakefront survey of

Lake Ontario within atin

c.1 a aa



Environment Ontario

Laboratory Library

125 Resources Rd.

Etobicoke, Ontario M9P 3V6

Canada